WHAT IS CLAIMED IS:

1.   A virtual local area network (VLAN) classification
system for a switching node characterized in that an inbound
packet having a VLAN identifier is assigned to a VLAN in
accordance with a classification mode selectable from ones of
classification modes.

2.   The VLAN classification system of claim 1 further
characterized   in   that   one   of   the   selectable   ones   of
classification modes causes the inbound packet to be assigned
to a VLAN associated with the VLAN ID from the packet.

3.   The VLAN classification system of claim 1 further
characterized   in   that   one   of   the   selectable   ones   of
classification modes causes the inbound packet to be assigned
to a VLAN associated with an ingress port.

4.   The VLAN classification system of claim 1 further
characterized   in   that   one   of   the   selectable   ones   of
classification modes causes the inbound packet to be assigned
to a VLAN associated with a protocol type of the packet.

5.   A virtual local area network (VLAN) tagging system
for a switching node characterized in that a VLAN ID in an
outbound packet is modified or not in accordance with a tagging
mode selectable from ones of tagging modes.

6.   The   VLAN   tagging   system   of   claim   5   further
characterized in that one of the selectable ones of tagging
modes causes the VLAN ID in the outbound packet to be retained
as received.

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7.   The   VLAN   tagging   system   of   claim   5   further
characterized in that one of the selectable ones of tagging
5   modes causes the VLAN ID in the outbound packet to be replaced
with a VLAN ID to which the outbound packet is classified at
inbound.

8.   The   VLAN   tagging   system   of   claim   5   further
10   characterized in that one of the selectable ones of tagging
modes causes the VLAN ID from the outbound packet to be removed
without substitution.

9.   A switching   node   having   a   plurality   of   ports
15   interconnected across a switching link, characterized in that a
first one of the ports has a first VLAN classification mode
operative thereon, further characterized in that a second one of
the ports has a second VLAN classification mode operative
thereon, wherein the first and second VLAN classification modes
20   are different.

10.   The switching mode of claim 9, further characterized
in that the first and second VLAN classification modes are
operative on inbound packets.
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11. A switching node having a plurality of ports
interconnected across a switching link, characterized in that a
first one of the ports has a first VLAN tagging mode operative
30   thereon, further characterized in that a second one of the ports
has a second VLAN tagging mode operative thereon, wherein the
first and second VLAN tagging modes are different.

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12. The switching node according to claim 11, further characterized in that the first and second VLAN tagging modes are
5   operative on outbound packets.

13. A virtual local area network (VLAN) classification system for a switching node including:
     a memory for storing a VLAN classification mode selectable
10   from ones of VLAN classification modes; and
     an ingress port controller coupled to thememory, the
     ingress port controller receiving an inbound packet on an
     associated ingress port and assigning the inbound packet to a
     VLAN based on the stored VLAN classification mode.

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     14. The system of claim 13, wherein the inbound packet
     includes a VLAN identifier, and the stored VLAN classification
     mode causes the inbound packet to be assigned to a VLAN
20   associated with the VLAN identifier.

     15. The system of claim 13, wherein the stored VLAN
     classification mode causes the inbound packet to be assigned to
     a VLAN associated with the ingress port.

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     16. The system of claim 13, wherein the stored VLAN
     classification mode causes the inbound packet to be assigned to
     a VLAN associated with a protocol type of the packet.

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     17. The system of claim 13, wherein a first ingress port
     controller is coupled to a first memory for storing a first VLAN
     classification mode and a second ingress port controller is
     coupled to a second memory for storing a second VLAN

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classification mode, wherein the first and second VLAN
classification modes are different.

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    18. A virtual local area network (VLAN) tagging system for
a switching node including:
    a memory for storing a VLAN tagging mode selectable from
ones of VLAN tagging modes; and

10   an egress port controller coupled to thememory, the egress
port controller determining whether to retain a VLAN identifier
in an outbound packet for transmission on an egress port based
on the stored VLAN tagging mode.

15   19. The system of claim 18, wherein the stored VLAN
tagging mode causes the VLAN identifier in the outbound packet
to be retained.

20   20. The system of claim 18, wherein the stored VLAN
tagging mode causes the VLAN identifier in the outbound packet
to be replaced with a VLAN identifier to which the outbound
packet is classified at inbound.

25   21. The system of claim 18, wherein the stored VLAN
tagging mode causes the VLAN identifier in the outbound packet
to be removed without substitution.

30   22. The system of claim 18, wherein a first egress port
controller is coupled to a first memory for storing a first VLAN
tagging mode and a second egress port controller is coupled to
a second memory for storing a second VLAN tagging mode, wherein
the first and second VLAN tagging modes are different.

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23.   In a data communication network including a switching
node receiving a data packet via an ingress port, a method for
classifying the data packet into a virtual local area network
(VLAN), the method comprising:

configuring for the ingress port a VLAN classification mode
selectable from ones of VLAN classification modes;

identifying   a   VLAN   based   on   the   selected   VLAN
classification mode; and

~~associating the packet with the identified VLAN.~~

24.   The method of claim 23, wherein the inbound packet
includes   a   VLAN   identifier,   and   the   configured   VLAN
classification mode causes the inbound packet to be assigned to
a VLAN associated with the VLAN identifier.

25.   The method of claim 23, wherein the configured VLAN
classification mode causes the inbound packet to be assigned to
a VLAN associated with the ingress port.

26.   The method of claim 23, wherein the configured VLAN
classification mode causes the inbound packet to be assigned to
a VLAN associated with a protocol type of the packet.

27.   The method of claim 23, wherein the switching node
includes a first ingress port having a first VLAN classification
mode configured therefor and a second ingress port having a
second VLAN classification mode configured therefor, wherein the
first and second VLAN classification modes are different.

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28.   In a data communication network including a switching
node having an egress port, a method for processing an outbound
packet having a virtual local area network (VLAN) identifier, the
method comprising:

configuring for the egress port a VLAN tagging mode
selectable from ones of VLAN tagging modes;

modifying or not the VLAN identifier in the outbound packet
based on the configured VLAN tagging mode; and

transmitting the outbound packet via the egress port.

29.   The method of claim 28, wherein the configured VLAN
tagging mode causes the VLAN identifier in the outbound packet
to be retained.

30.   The method of claim 28, wherein the configured VLAN
tagging mode causes the VLAN identifier in the outbound packet
to be replaced with a VLAN identifier to which the outbound
packet is classified at inbound.

31.   The method of claim 28, wherein the configured VLAN
tagging mode causes the VLAN identifier to be removed without
substitution.

32.   The method of claim 28, wherein the switching node
includes a first egress port having a first VLAN tagging mode
configured therefor and a second egress port having a second VLAN
tagging mode configured therefor, wherein the first and second
VLAN tagging modes are different.

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